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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/593,613

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Andrey Victorovich Larichev

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FRISHAUF, HOLTZ, GOODMAN & CHICK, PC
220 Fifth Avenue
16TH Floor
NEW YORK, NY 10001-7708

EXAMINER

SCHWARTZ, JORDAN MARC

ART UNIT

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2873

MAIL DATE

DELIVERY MODE

09/15/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/593,613	Applicant(s) LARICHEV ET AL.	
	Examiner Jordan M. Schwartz	Art Unit 2873	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 May 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 30-43 is/are pending in the application.
- 4a) Of the above claim(s) 40-43 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 30-32, 34-37 and 39 is/are rejected.
- 7) ☒ Claim(s) 33 and 38 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 September 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>9/21/06, 1/2/08</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

Applicant's election without traverse of Group I, claims 30-39 in the reply filed on May 28, 2009 is acknowledged.

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Specification

The abstract of the invention is objected to because it is too long. Specifically, the abstract cannot exceed 150 words and cannot be more than 15 lines in length and therefore needs to be shortened. See MPEP 37 CFR 1.72 and 608.01(b).

The specification is also objected to for the following reason. On page 13, line 2, "two lenses (7a and 7b)" is presumed to be "two lenses (7a and 7d)". Specifically, "7b" is disclosed as and labeled as the movable prism (see figure 2 and specification page 13, line 3) and 7d is a lens of the refraction compensator (see figure 2). Correction is required.

Furthermore, the following guidelines illustrate the preferred layout and content for patent applications. These guidelines are suggested for the applicant's use. The following section headings are preferably used within the specification where appropriate and each of the numbered items should appear in upper case, without underlining or bold type, as section heading.

1. BACKGROUND OF THE INVENTION

2. SUMMARY OF THE INVENTION

3. BRIEF DESCRIPTION OF THE DRAWINGS

4. DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

Claim Rejections - 35 USC § 112

Claims 31-32 and 36-37 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With respect to claims 31 and 36, the claimed “movable prism and a dichroic mirror placed between two lenses” renders the claims vague and indefinite. Specifically, it is not clear if applicant is claiming just the dichroic mirror is between the two lenses or that both the movable prism and dichroic mirror is between the two lenses (with the latter being the presumed meaning for purposes of examination). If the presumed meaning above is correct it is suggested that applicant claim “comprises a movable prism and a dichroic mirror with both said movable prism and dichroic mirror placed between two lenses” for clarity.

With respect to claims 32 and 37, the claimed “comprises two cylindrical or toric lenses of opposite signs, which can be independently rotated around the optical axis” renders the claims vague and indefinite. It is not clear if applicant is claiming that just the toric lenses are of opposite signs or if applicant is claiming that the two cylindrical lenses would also be of opposite signs. Additionally, it is not clear if just the toric lenses can be rotated or if applicant is also claiming that the cylindrical lenses can be rotated. For purposes of examination the presumed meaning is “comprises two cylindrical

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lenses of opposite signs or two toric lenses of opposite signs, wherein the two cylindrical lenses or two toric lenses can be independently rotated around the optical axis”.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 30, 34-35 and 39 are rejected under 35 U.S.C. 102(e) as being anticipated by Levine patent number 6,964,480.

Levine reads on these claims by disclosing the limitations therein including the following: an ophthalmologic instrument to measure the aberrations of the eye (abstract, column 1, lines 56-67, column 5, line 65 to column 6, line 2); comprising a point light source which is projected onto the retina of an eye to create a virtual light source on it (figure 6A, light source “51”, column 8, lines 16-20, column 12, lines 47-55); the radiation being scattered by the retina and passes through the optical system of the eye and becomes phase-modulated which corresponds to the total optical aberrations of the eye (column 12, lines 56 to column 13, line 27 and regardless, light reflected by the retina from a point light source will inherently be phase-modulated by the eye corresponding to the total optical aberrations of the eye); a system for measuring the

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shape of the wavefront of the radiation leaving the eye (figure 6A, column 14, line 51 to column 15, line 30, column 16, lines 42-54, wavefront sensor "55"); the output signal of which is passes to the control system of the instrument (figure 6a, column 14, lines 15-19, showing "wavefront sensor 55" connected to "controller 57"); a system for compensating for the aberrations located between the eye and the measuring system (figure 6A, column 15, lines 10-19, column 16, lines 42-54, phase compensator "53" located between the light reflected from the eye "1" and the measuring system "55" and which compensates aberrations of the eye); the compensation system comprising a refraction compensator that controls focusing of the radiation scattered by the retina (abstract, column 7, lines 6-15); the compensating system comprising an astigmatism compensator (column 18, line 59 to column 19 ,line 7). It is believed that the phase compensator of Levine (and therefore the astigmatism compensator) will inherently be located at the image plane of the pupil of the eye for the purpose of providing the required astigmatism and aberration compensation similar to that of the claimed invention. Levine further discloses a projector of test patterns that jointly with the compensators projects an image of a test pattern onto the retina (abstract, column 6, lines 10-18, column 12, lines 1-11, column 15, lines 3-19, figure 6a, the projection of the fixation target "71" which projected target onto the retina can be considered as a "test pattern"); an alignment system that allows adjusting the proper distance between the eye and the instrument (column 19, lines 59-64); and the compensation system further including a compensator of high-order aberrations (abstract, column 18, line 59 to column 19, line 6).

Prior Art Citations

Olivier et al publication number 2004/0100619 is being cited herein to show and ophthalmic instrument that would have read on or made obvious claims 30, 34-35 and 39, however, such rejections would have been repetitive.

Neal publication number 2003/0193647 is being cited herein to show an ophthalmologic instrument having some similar structure to the claimed invention. Specifically, Neal discloses the limitations of at least independent claims 30 and 35 but does not disclose or make obvious the claimed "projector of test patterns, which jointly with said compensators, projects the image of a test pattern onto a retina". Specifically, while Neal discloses projection of target patterns on the eye, they are disclosed as strictly for alignment purposes and are not disclosed nor made obvious as being projected "jointly with said compensators".

Allowable Subject Matter

Claims 31-32 and 36-37 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Claims 33 and 38 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: with respect to the allowable subject matter, none of the prior art either alone or in combination disclose or teach of the claimed combination of limitations to warrant a

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rejection under 35 USC 102 or 103. Specifically, with reference to claims 31 and 36, none of the prior art either alone or in combination disclose or teach of the ophthalmic instrument specifically including, as the distinguishing features in combination with the other limitations, the refraction compensator comprising a movable prism and a dichroic mirror with both placed between two lenses, the mirror also serving as a beam-splitter used to align the instrument. Specifically, with reference to claims 32 and 37, none of the prior art either alone or in combination disclose or teach of the ophthalmic instrument specifically including, as the distinguishing features in combination with the other limitations, the astigmatism compensator comprising two cylindrical lenses of opposite signs or two toric lenses of opposite signs, wherein the two cylindrical lenses or two toric lenses can be independently rotated around the optical axis of the compensator, and a system for precisely setting the initial turning angles of the lenses. Specifically, with reference to claims 33 and 38, none of the prior art either alone or in combination disclose or teach of the ophthalmic instrument specifically including, as the distinguishing features in combination with the other limitations, the instrument further comprising a built-in automatic calibration system which uses an additional virtual light source as a test element that allows precisely measuring the current positions of the compensators.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jordan M. Schwartz whose telephone number is 571-

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272-2337. The examiner can normally be reached on Monday to Friday from 8:00 to 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Mack can be reached on 571-272-2333. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jordan M. Schwartz
Primary Examiner
Art Unit 2873
September 10, 2009

/Jordan M. Schwartz/
Primary Examiner, Art Unit 2873